

REMARKS

The following remarks are in response to the Final Office Action mailed April 28, 2005.

Applicant's Attorney notes with appreciation the thoroughness and thoughtfulness provided in the rejection of the claims of the instant application. It appears that the issue is one of semantics and not of structure. In view of that, the claims have all been amended to more clearly set forth the present invention. A detailed discussion of the references cited may be found in the prior amendment which comments are incorporated herein by reference. Applicant's Attorney also notes with appreciation the indicated allowability of claims 27 and 48 if rewritten in independent form. In view of the current amendments and remarks, it is believed the claims from which these claims depend are allowable. Thus, claims 27 and 48 have not been rewritten at this time pending favorable disposition of the other claims.

Representative of the cited references are Inoue et al. and Gire et al. These two representative patents disclose distinctly different types of valves, neither of which can support the rejections of the claims and in particular, the anticipation rejections of the claims. Gire et al. disclose a valve for controlling a vertical takeoff and landing aircraft, not an automotive coolant control valve as set forth in some of the claims in the instant application. The valve does however have a central rotor with an axial flow path for directing the flow of fluid from an axial inlet 1 to various radially directed openings for example 6B and apparently 6A as seen in Fig. 1. The outlets are on multiple levels (axial positions), but, the inlet and the main flow path are axial. Inoue et al. discloses a rotary valve having a conduit, for example A1 as seen in Fig. 1, which

can select a flow path between various inlets and outlets by the rotational position of the rotor. However, the flow through the valve is only in one plane as opposed to multiple planes as disclosed by Gire et al.

The Examiner concludes that the recitation of inlet and outlets in the claims merely relates to intended use and are given no weight. It is requested that the Examiner reconsider this position. It is submitted that definition in a valve of an inlet and an outlet is structural and not one of intended use. A valve is designed to achieve specific flow paths and, even though at one level of analysis an opening may be an opening, plumbing a valve in the wrong direction can preclude the valve from functioning in the way intended. A good example of such is a check valve which if plumbed incorrectly, will preclude flow as opposed to allow flow. A kitchen faucet valve would present difficulties if plumbed in reverse. It is submitted that the use of the terms inlet and outlet is structural, even though it is also functional. It is perfectly appropriate in claims to define structure with a functional term.

All the structure claims now require that the valve have a rotor with a plurality of fluid passage arrangements located in different planes and a fluid passage connecting the same. The fluid passage arrangements include a conduit that extends across at least a portion of the rotor and is adapted to direct the flow transversely across the rotor from one opening to another opening including an inlet and an outlet. None of the references disclose a rotary valve having fluid passage arrangements located in different planes and adapted to direct flow of fluid transversely across the rotor. Gire et al. and many of the other references of record, have axial flow through the rotor which flow is then turned from an axial direction to various holes in the

sidewall of the rotor which sidewalls can be located at different levels (axial positions) in the rotor. None of the references of record disclose or suggest that the particular structure now claimed in the structure claims. Thus, the anticipation rejections cannot be supported by the references of record since each and every claimed element is not disclosed therein.

Reconsideration and withdrawal of all the anticipation rejections are respectfully requested.

The method claims, claims 40-57 now contain similar limitations in methods terminology as those contained in the apparatus claims. Thus, the rejection of the method claims as being anticipated also fails because each and every element of the claims is not disclosed in any of the cited or applied references. They too require flow paths on two different levels within a rotary valve and through a connecting flow path with the flow being generally transversely across the rotor from an inlet to various outlets and axially when flowing from one flow path arrangement at one level to the other flow path arrangement at a second level within the rotor. None of the references disclose such a method and thus, the anticipation rejections of these claims cannot be supported from these references of record. Reconsideration and withdrawal of these rejections are respectfully requested.

It is to be noted, that Gire et al., the apparent principal reference relied upon has all flow originally flowing along the longitudinal axis of the valve and then it changes direction to exit through various side ports in the sidewall of the rotor. There is no structure in Gire et al. to direct flow of fluid transversely across the valve from an inlet to an outlet.

Various independent claims have also been rejected as being obvious. Those include claims 22, 25, 36, 52, 57, 29 and 40. Those rejections will be discussed in turn below.

Claims 22 and 25 stand rejected as being obvious over Gire et al. in view of Flider. Because of the limitations contained in the claims that distinguish these claims from Gire et al., those limitations distinguish the claims from Gire et al. in view of Flider. The combination of Gire et al., in view of Flider do not render obvious the structure as now defined, since the combination of the two references does not disclose or suggest the now defined structure. It is respectfully requested that this rejection be reconsidered and withdrawn.

Claim 25 also stands rejected as being obvious over Ford et al. in view of Flider. Ford et al. was discussed in the last amendment and need not be discussed herein. Ford et al. have no need for a biasing mechanism and thus, the attempted combination of Flider with Ford et al. is inappropriate. Additionally, Ford et al. do not disclose the valve structure as now defined in claim 25 in view of the current amendments. Thus, the combination of references will not support an obviousness rejection. It is respectfully requested that this rejection be reconsidered and withdrawn.

Independent claims 25, 36, 52 and 57 stand rejected as being obvious over Aoki et al. in view of Spies et al. Aoki et al. does not disclose or suggest a valve or method as now defined in the rejected independent claims. It is a single level valve that has axial flow that is only converted to transverse flow at one level in the valve rotor, for example, as seen in Fig. 3 at 262. Thus, the combination of Aoki et al. in view of Spies et al. and in further view of Flider does not teach or suggest the present invention as now defined in the subject claims. It is respectfully requested that this rejection be reconsidered and withdrawn.

Independent claim 29 stands rejected under 35 USC 103(a) as being unpatentable over

Amendment B
Application No. 10/605,473
Attorney Docket No.: 718395.52

Lehmann in view of Inoue et al. Lehmann shares the same deficiencies as the other references discussed above. It is a single level rotary valve and the initial flow into the valve is directed axially and then flows through a side port. Lehmann's combination with Inoue et al. does not teach or suggest the present invention as discussed above. It is respectfully requested that this rejection be reconsidered and withdrawn.

Independent claim 40 stands rejected under 35 USC 103(a) as being unpatentable over Bondi. In view of the amendments to claim 40, and how those amendments further distinguish the present invention over the references of record in general as discussed above, claim 40 is distinguished over Bondi. Bondi permits flow from an inlet 11 through outlets 36 continuously. The fuel flows through the rotor through an axially direct passage 22 and allows flow between the rotor or spool in the valve housing. In view of the amendments to claim 40 it is submitted that Bondi does not teach or suggest the present invention as now defined. It is respectfully requested that this rejection be reconsidered and withdrawn. Because the remainder of the rejected claims are dependent claims and depend from what are believed to be allowable claims, it is respectfully that these rejections be reconsidered and withdrawn. Arguments in detail for these claims was presented in the prior response.

It is respectfully requested that the rejections of the claims be reconsidered and withdrawn. None of the references of record now suggest or teach either individually or in combination the valve or method as now defined in the claims.

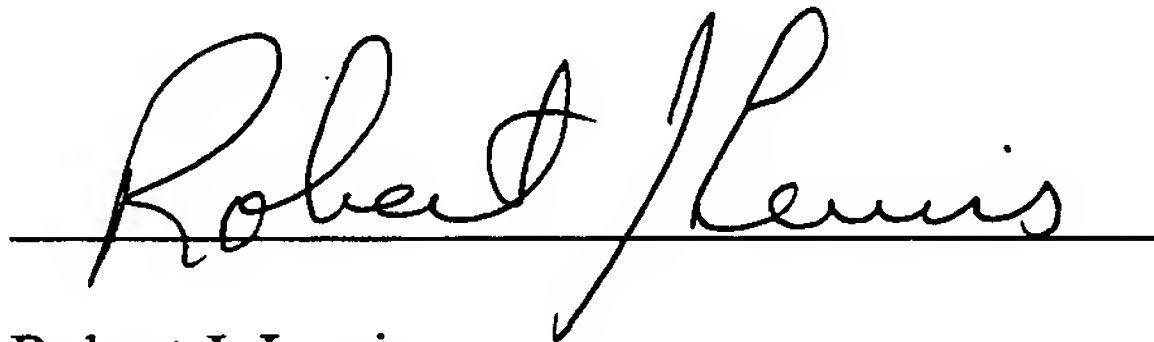
Amendment B
Application No. 10/605,473
Attorney Docket No.: 718395.52

If any issue regarding the allowability of any of the pending claims in the present application could be readily resolved, or if other action could be taken to further advance this application such as an Examiner's Amendment, or if the Examiner should have any questions regarding this amendment, it is respectfully requested that Examiner please telephone Applicants' undersigned Attorney in this regard.

Respectfully submitted,

Date:

7/26/05

A handwritten signature in cursive script, reading "Robert J. Lewis", written over a horizontal line.

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